UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,424	08/30/2001	Avi Kliger	TIA-001	7853

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EXAMINER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
Office Action Summary	09/943,424	KLIGER ET AL.
	Examiner	Art Unit	
	CASSANDRA DECKER	2419	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 November 2008*.
2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *71,73-82,84-89,96 and 98-106* is/are pending in the application.
  4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *71,73-82,84-89,96 and 98-106* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
  Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
  Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  a)☐ All   b)☐ Some * c)☐ None of:
    1.☐ Certified copies of the priority documents have been received.
    2.☐ Certified copies of the priority documents have been received in Application No. _____.
    3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
  * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date *18 November 2008*.
4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____ .

Detailed Action

Request for continued examination

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 18 November 2008 has been entered.

Claim Rejections – 35 USC 103

1.   The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2.   Claims 71, 73-76, 78-82, 84-86, 88-89, 96, 98-101, and 103-106 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petler (US 6081519) in view of Bell (US 6229818).

For Claims 71, 82, and 96, Petler teaches, in a home network having a plurality of network modules, each of said network modules being connected to a coax backbone (see column 4 lines 34-50), a method for communicating over the coax backbone between network modules, the method comprising:

using the master module to receive requests sent over the coax backbone from network modules for bandwidth to transmit bursts (see column 6 lines 8-23, column 10 lines 20-50);

establishing an order of transmission opportunities for the network modules to follow when transmitting bursts to other network modules via the coax backbone (see column 6 lines 24-45, column 2 lines 9-34), said transmission order being based at least in part on said received requests (see column 10 lines 20-50, column 6 lines 8-67); and

using the master module to transmit an allocation burst over the coax backbone that allocates a transmission opportunity to each of the modules to transmit bursts to other network modules via the coax backbone (see column 2 lines 9-55, column 7 lines 20-45), said transmission opportunity that depends at least in part on the amount of data ready for transmission in a selected transmission cycle (see column 6 lines 8-23 and 45-67), said allocation burst being based on said transmission order (see column 6 lines 9-34).

Petler does not teach one of said modules being a network master module, or transmissions directly to other network modules via the backbone. However, Bell teaches one of said modules being a network master module (see column 5 lines 22-59, column 6 lines 54-64, and column 8 lines 17-25), and transmissions directly to other network modules via the backbone (see column 5 lines 22-59, column 6 lines 54-64, and column 8 lines 17-25). Thus it would have been obvious to a person of ordinary skill in the art to combine the functions of the BNU and BIU, which operate as a master module outside the home as taught by Petler, with a network master module within the home, with a home network of modules communicating directly over an existing physical medium (see column 2 lines 6-12), as taught by Bell. The motivation for doing so would be to improve home network security by keeping LAN communications within

the home, and to allow the wide area network service provider to increase revenues by

selling or leasing master modules to consumers and to offload the costs of operating the

master module onto the consumers.

For Claims 73 and 98, although Petler teaches a master module (see Figure 1

item 110 and column 2 line 65 to column 3 line 7), Petler does not teach designating

one of the modules to be the master module. However, Bell teaches designated one of

the modules to be the master module (see column 5 lines 22-59, column 6 lines 54-64,

and column 8 lines 17-25). Thus it would have been obvious to a person of ordinary skill

in the art to designate a module to operate as a master module, combining the functions

of the BNU and BIU, which operate as a master module outside the home as taught by

Petler. The motivation for doing so would be to improve home network security by

keeping LAN communications within the home, and to allow the wide area network

service provider to increase revenues by selling or leasing master modules to

consumers and to offload the costs of operating the master module onto the consumers.

For Claims 74, 84, and 99, Petler further teaches synchronizing the network

modules to a predetermined burst transmitted by the master (see Figure 7).

For Claims 75, 85, and 100, Petler further teaches allocating bandwidth to each

network module requesting a guaranteed quality of service (see column 6 lines 8-24:

CBR is the guaranteed quality of service).

For Claims 76, 86, and 101, Petler further teaches receiving over the backbone,

at a selected network module, a grant signal that indicates that the given network

module can transmit a burst (see column 6 lines 46-58).

For Claims 78 and 103, Petler further teaches changing the amount of allocated bandwidth (see column 6 lines 7-23).

For Claims 79, 88, and 104, Petler further teaches using the master module to change the order of transmission opportunities (see column 9 lines 10-25: the modules will transmit in a different order because each time BNU assigns a different one or more time slots to the modules).

For Claims 80 and 105, Petler further teaches using the master module to change the order of transmission opportunities and to change the amount of allocated bandwidth (see column 9 lines 10-25 and column 6 lines 7-23).

For Claims 81, 89, and 106, Petler further teaches using the master module to allocate an opportunity to a module involved in a registration process, said opportunity for transmitting a self-training burst (see column 10 lines 20-33).

3.   Claims 77, 87, and 102 are rejected under 35 U.S.C. 103(a) as being unpatentable over Petler (US 6081519) and Bell (US 6229818) as applied to claim 71, 82, and 96 above, and further in view of Jain et al. (US 4608685).

For Claims 77, 87, and 102, Petler does not teach transmitting, by a selected network module, an empty burst if the given network module has no data to transmit. However, Jain teaches transmitting, by a selected network module, an empty burst if the given network module has no data to transmit (see column 6 lines 8-12). Thus it would have been obvious to a person of ordinary skill in the art to use a null, or empty, transmission in place of a heartbeat transmission. A person of ordinary skill in the art

would have been able to carry out such a substitution and the results were reasonably

predictable.

4.   Claims 71, 73-76, 78-82, 84-86, 88-89, 96, 98-101, and 103-106 are rejected

under 35 U.S.C. 103(a) as being unpatentable over Bushmitch et al. (US 6950399) in

view of Bell (US 6229818).

For Claims 71, 82, and 96, Bushmitch teaches, in a home network having a

plurality of network modules, each of said network modules being connected to a coax

backbone (see Figure 1 and column 3 lines 30-48), a method for communicating over

the coax backbone between network modules, the method comprising:

using the master module to receive requests sent over the coax backbone from

network modules for bandwidth to transmit bursts (see column 1 lines 47-64);

establishing an order of transmission opportunities for the network modules to

follow when transmitting bursts to other network modules via the coax backbone (see

column 3 line 55 to column 4 line 19, column 5 lines 45-67: requests, grants), said

transmission order being based at least in part on said received requests (see column 3

line 55 to column 4 line 19, column 5 lines 45-67); and

using the master module to transmit an allocation burst over the coax backbone

that allocates a transmission opportunity to each of the modules to transmit bursts to

other network modules via the coax backbone (see column 1 line 47 to column 2 line

35), said transmission opportunity that depends at least in part on the amount of data

ready for transmission in a selected transmission cycle (see column 2 lines 20-32 and

column 5 lines 45-67), said allocation burst being based on said transmission order (see

column 3 line 55 to column 4 line 19, column 5 lines 45-67).

Bushmitch does not teach one of said modules being a network master module,

or transmissions directly to other network modules via the backbone. However, Bell

teaches one of said modules being a network master module (see column 5 lines 22-

59, column 6 lines 54-64, and column 8 lines 17-25), and transmissions directly to other

network modules via the backbone (see column 5 lines 22-59, column 6 lines 54-64,

and column 8 lines 17-25). Thus it would have been obvious to a person of ordinary skill

in the art to combine the functions of the CMTS and CM, which operate as a master

module partially outside the home as taught by Bushmitch, into a network master

module entirely within the home, with a home network of modules communicating

directly over an existing physical medium (see column 2 lines 6-12), as taught by Bell.

The motivation for doing so would be to improve home network security by keeping LAN

communications within the home, and to allow the wide area network service provider to

increase revenues by selling or leasing master modules to consumers and to offload the

costs of operating the master module onto the consumers.

For Claims 73 and 98, although Bushmitch teaches a master module (see

Figure 1 and column 6 lines 45-16), Bushmitch does not teach designating one of the

modules to be the master module. However, Bell teaches designated one of the

modules to be the master module (see column 5 lines 22-59, column 6 lines 54-64, and

column 8 lines 17-25). Thus it would have been obvious to a person of ordinary skill in

the art to designate a module to operate as a master module, combining the functions of

the CM and CMTS, which operate as a master module partially outside the home as taught by Bushmitch. The motivation for doing so would be to improve home network security by keeping LAN communications within the home, and to allow the wide area network service provider to increase revenues by selling or leasing master modules to consumers and to offload the costs of operating the master module onto the consumers.

For Claims 74, 84, and 99, Bushmitch further teaches synchronizing the network modules to a predetermined burst transmitted by the master (see column 4 lines 20-30).

For Claims 75, 85, and 100, Bushmitch further teaches allocating bandwidth to each network module requesting a guaranteed quality of service (see column 3 lines 16-30).

For Claims 76, 86, and 101, Bushmitch further teaches receiving over the backbone, at a selected network module, a grant signal that indicates that the given network module can transmit a burst (see column 3 line 55 to column 4 line 19: grants, allocation).

For Claims 78 and 103, Bushmitch further teaches changing the amount of allocated bandwidth (see column 1 line 45 to column 2 line 35).

For Claims 79, 88, and 104, Bushmitch further teaches using the master module to change the order of transmission opportunities (see column 3 line 55 to column 4 line 19: time slots; column 5 lines 45-67: dynamic grants).

For Claims 80 and 105, Bushmitch further teaches using the master module to change the order of transmission opportunities and to change the amount of allocated

bandwidth (see column 1 line 45 to column 2 line 35, column 5 lines 45-67: dynamic

grants, column 3 line 55 to column 4 line 14: TDM).

For Claims 81, 89, and 106, Bushmitch further teaches using the master module

to allocate an opportunity to a module involved in a registration process, said

opportunity for transmitting a self-training burst (see column 4 lines 3-18).

5.   Claims 77, 87, and 102 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bushmitch et al. (US 6950399) and Bell (US 6229818) as applied to

claims 71, 82, and 96 above, and further in view of Jain et al. (US 4608685).

For Claims 77, 87, and 102, Bushmitch does not teach transmitting, by a

selected network module, an empty burst if the given network module has no data to

transmit. However, Jain teaches transmitting, by a selected network module, an empty

burst if the given network module has no data to transmit (see column 6 lines 8-12).

Thus it would have been obvious to a person of ordinary skill in the art to use a null, or

empty, transmission in place of a heartbeat transmission. A person of ordinary skill in

the art would have been able to carry out such a substitution and the results were

reasonably predictable.

Response to Arguments

6.   Applicant's arguments with respect to claims 71, 82, and 96 have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

7.   The prior art made of record and not relied upon is considered pertinent to

applicant's disclosure. Klein (US 6637030) teaches a home network over existing coax

with all LAN signals remaining within the home.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to CASSANDRA DECKER whose telephone number is

(571)270-3946. The examiner can normally be reached on Monday through Friday,

7:30 am to 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Daniel J. Ryman can be reached on (571) 272-3152. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see http://pair-direct.uspto.gov. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Cassandra Decker/
Examiner, Art Unit 2419
12/17/2008

/Daniel J. Ryman/
Supervisory Patent Examiner, Art Unit 2419